

RECEIVED  
AUG 10 1989

**FOREIGN PATENT DOCUMENTS**

**Other Documents** (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER	DATE CONSIDERED
----------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(modified)

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

ATTY. DOCKET NO.

SERIAL NO.

ENZ-1 (Cont.) Div III

130.070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	4 0 4 8 3 0 7	9/13/77	Yokota et al.	424	180	
	AB	4 0 8 6 4 1 7	4/25/78	Ishida et al.	536	29	
	AC	4 0 8 8 6 3 9	5/9/78	Zappelli et al.	260	112.5R	
	AD	4 0 9 6 3 2 4	6/20/78	Kelly et al.	536	23	
	AE	4 1 3 4 7 9 2	1/16/79	Boguslaski et al.	195	99	
	AF	4 1 5 1 3 4 9	4/24/79	Traeger et al.	536	28	
	AG	4 1 7 1 4 3 2	10/16/79	Carrico et al.	536	26	
	AH	4 2 1 3 8 9 3	7/22/80	Carrico et al.	260	112.5	
	AI	4 2 2 8 2 3 7	10/14/80	Hevey et al.	435	7	
	AJ	4 2 3 0 6 9 8	10/28/80	Bobek et al.	424	180	
	AK	4 2 3 0 7 9 7	10/28/80	Boguslaski et al.	435	7	

RECEIVED GROUP 18  
AUG 10 1989

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL	2 0 3 4 3 2 3	6/4/80	United Kingdom Pat. Appln.	3			
	AM	2 0 4 1 9 2 2	9/17/80	United Kingdom Pat. Appln.	3			
	AN	2 0 4 5 2 3 9	10/29/80	United Kingdom Pat. Appln.	3			
	AO	2 1 2 5 9 6 4	3/14/84	United Kingdom Pat. Appln.	3			
	AP	0 7 0 6 8 5	1/26/83	EPO Patent Application	3			

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

E. A. Bayer and M. Wilchek, "The Use of the Avidin-Biotin Complex as a Tool in Molecular Biology," in Methods of Biochemical Analysis, 26, pp. 1-45 (1980)D. Bergstrom and M. Ogawa, "C-5 Substituted Pyrimidine Nucleosides. 2. Synthesis Via Olefin Coupling To Organopalladium Intermediates Derived From Uridine and 2'-Deoxyuridine, J. Am. Chem. Soc., 100, pp. 8106-8112 (1978) ["Bergstrom I"]

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449  
(REV. 7-80)

(modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

ENZ-1 (Cont.) Div III

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA		4 2 4 7 5 4 4	1/27/81	Bergstrom et al.	424	180	
AB							
AC		4 2 6 1 8 9 3	4/14/81	Boguslaski et al.	260	326N	
AD		4 2 6 7 1 7 1	5/12/81	Bergstrom et al.	424	180	
AE		4 3 0 2 2 0 4	11/24/81	Wahl et al.	23	230.3	
AF		4 3 1 8 9 8 0	3/9/82	Boguslaski et al.	435	7	
AG		4 3 1 8 9 8 1	3/9/82	Burd et al.	435		
AH		4 3 1 8 9 8 2	3/9/82	Hornby et al.	435	7	
AI		4 3 5 5 1 6 5	10/19/82	Boguslaski et al.	544	237	
AJ		4 3 5 8 5 3 5	11/9/82	Falkow et al.	435	5	
AK		4 3 6 3 7 5 9	12/14/82	Boguslaski et al.	260	112.7	

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES NO
	AL	7 0 6 8 7	1/26/83	EPO Patent Application	3		
	AM	1 5 4 8 7 4 1	7/18/79	Great Britain Patent	2	33/16	
	AN	1 5 5 2 6 0 7	9/19/79	Great Britain Patent	2	33/16	
	AO	4 3 2 4 1 9 1	10/18/43	Japanese Patent Application	16E	611.2	X
	AP	5 8 6 2 1 9 4	4/13/83	Japanese Patent Application	3C07H	19/06	X

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	D. Bergstrom and J. L. Ruth, "Properties of C-5 Mercurated Pyrimidine Nucleosides," <u>J. Carbohydrates, Nucleotides and Nucleosides</u> , 4, pp. 257-289 (1977) ["Bergstrom II"]
AS	C. F. Bigge et al., "Palladium-Catalyzed Coupling Reactions of Uracil Nucleosides and Nucleotides," <u>J. Am. Chem. Soc.</u> , 102, pp. 2033-2038 (1980)
AT	C. Brandon et al., "Structure of a New Pyrimidine from <u>Bacillus Subtilis</u> Phage SP-15 Nucleic Acid", <u>Nature New Biology</u> , 239, pp. 70-71 (1972)
EXAMINER	DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(modified)

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

ATTY. DOCKET NO.

ENZ-1 (Cont.) Div. III

SERIAL NO.

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA		4 3 7 4 9 2 5	2/22/83	Litman et al.	435	7	
AB		4 3 8 0 5 8 0	4/19/83	Boguslaski et al.	435	7	
AC		4 3 8 3 0 3 1	5/10/83	Boguslaski et al.	435	7	
AD		4 4 4 6 2 3 1	5/1/84	Self	435	7	
AE		4 4 6 9 8 6 3	9/4/84	Ts'o et al.	536	27	
AF		5 7 2 0 0 8	4/28/75	Boguslaski et al. *			
AG							
AH							
AI							
AJ							
AK							

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL		8 3 0 2 2 7 6	7/7/83	PCT Patent Application	3C07H	19/20	X**
AM		8 3 0 2 2 7 7	7/7/83	PCT Patent Application	3C07H	21/00	X**
AN		8 3 0 2 2 8 6	7/7/83	PCT Patent Application	3C12Q	1/68	X**
AO							
AP							

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR		T. R. Broker et al., "Electron Microscopic Visualization Of tRNA Genes with Ferritin-Avidin: Biotin Labels," <u>Nucl. Acids Res.</u> , 5, pp. 363-83 (1978)
AS		R. M. K. Dale et al., "Direct Covalent Mercuration of Nucleotides and Polynucleotides," <u>Biochemistry</u> , 14, pp. 2447-2457 (1975) ["Dale I"]
AT		

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\* United States patent application  
\*\* Abstract only.

(modified)

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

ATTY. DOCKET NO.

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
					YES NO
AL					
AM					
AN					
AO					
AP					

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	R. M. K. Dale et al., "The Synthesis and Enzymatic Polymerization of Nucleotides Containing Mercury: Potential Tools for Nucleic Acid Sequencing and Structural Analysis, Proc. Natl. Acad. Sci. USA, 70, pp. 2238-2242 (1973) ["Dale II"]
AS	W. S. Dallas and S. Falkow, "Molecular and Genetic Analysis of a DNA Sequence Encoding for Enterotoxin Synthesis in Escherichia Coli," Thirteenth Joint Conference on Cholera, The U.S.-Japan Cooperative Medical Science Program (1979) ["Dallas I"]
AT	

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

ATTY. DOCKET NO.

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

RECEIVED GROUP 100

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AL						
	AM						
	AN						
	AO						
	AP						

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

	AR	W. S. Dallas et al., "The Characterization of an <u>Escherichia Coli</u> Plasmid Determinant That Encodes for the Production of a Heat-Labile Enterotoxin," <u>Plasmids of Medical Environmental and Commercial Importance</u> , K. N. Timmis and A. Puhler, editors, Elsevier/North-Holland Biomedical Press (1979) ["Dallas II"]
	AS	
	AT	D. J. Eckermann and R. H. Symons, "Sequence at the Site of Attachment of an Affinity-Label Derivative of Puromycin on 23-S Ribosomal RNA of <u>Escherichia coli</u> Ribosomes," <u>Eur. J. Biochem.</u> , 82, pp. 225-34 (1978)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

## Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

ENZ-1 (Cont.) Div III

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	M. Ya. Feldman, <u>Reactions of Nucleic Acids and Nucleoproteins With Formaldehyde</u> , ____ Ed. (19__)
AS	H. G. Gratzner, "Monoclonal Antibody to 5-Bromo- and 5-Iododeoxyuridine: A New Reagent for Detection of DNA Replication," <u>Science</u> , 218, pp. 474-475 (1982)
AT	M. Grunstein and D. Hogness, "Colony Hybridization: A Method for the Isolation of Cloned DNAs That Contain a Specific Gene", <u>Proc. Natl. Acad. Sci. USA</u> , 72, pp. 3961-65 (1975)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM FTO-1449  
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

(modified)

ENZ-1 (Cont.) Div III

130,070

## Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
					YES NO
AL					
AM					
AN					
AO					
AP					

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. L. Guesdon et al., "The Use of Avidin-Biotin Interaction In Immunoenzymatic Techniques", <u>J. Histochem. and Cytochem.</u> 27, pp. 1131-39 (1979)
AS	H. Hayashi and K. Nakanishi, "Synthesis and Absolute Configuration of (+)-5-(4',5'-Dihydroxypentyl)uracil from <u>Bacillus Subtilis</u> Phage SP-15 Deoxyribonucleic Acid," <u>J. Am. Chem. Soc.</u> , 95, pp. 4081-4083 (1973) [Hayashi I]
AT	H. Hayashi et al. "Structure and Synthesis of Dihydroxypentyl-uracil from Bacteriophage SP-15 Deoxyribonucleic Acid," <u>J. Am. Chem. Soc.</u> , 95, pp. 8749-8757 (1973) [Hayashi II]

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



(modified)

ATTY. DOCKET NO.

SERIAL NO.

ENZ-1 (Cont.) Div III 130,070

## Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL							
	AM							
	AN							
	AO							
	AP							

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

	AR	K. Hofmann et al., "Iminobiotin Affinity Columns And Their Application To Retrieval Of Streptanidin", <u>Proc. Natl. Acad. Sci. USA</u> , 77, pp. 4666-68 (1980)
	AS	E. S. Huang and J. S. Pagano, "Nucleic Acid Hybridization Technology and Detection of Proviral Genomes," <u>Methods Virol.</u> , 6, pp. 457-497 (1977)
	AT	A. M. Jeffrey et al., "Benzo[a] pyrene-Nucleic Acid Derivative Found In Vivo: Structure of a Benzo[a] pyrenetetrahydrodiol Epoxide-Guanosine Adduct," <u>J. Am. Chem. Soc.</u> , 98, pp. 5714-5715 (1976)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(modified)

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AL							
AM							
AN							
AO							
AP							

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	R. G. Kallen et al., "The Occurrence of a New Pyrimidine Base Replacing Thymine in a Bacteriophage DNA: 5-Hydroxymethyl Uracil," <u>J. Mol. Biol.</u> 5, pp. 248-250 (1962)
AS	D. E. Kennel, "Principles And Practicss of Nucleic Acid Hybridization" <u>Pro. Nucl. Acid Res.</u> , 11, 259-301 (1971)
AT	M. Koreeda et al., "Alkylation of Polyguanylic Acid at the 2-Amino Group and Phosphate by the Potent Mutagen ( $\pm$ )-7 $\beta$ , 8 $\alpha$ -Dihydroxy-9 $\beta$ , 10 $\beta$ epoxy -7,8,9,10-tetrahydrobenzo[a]pyrene," <u>J. Am. Chem. Soc.</u> , 98, pp. 6720-6722 (1976)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

## Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL							
	AM							
	AN							
	AO							
	AP							

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	T. T. Kuo et al., "5-Methylcytosine Replacing Cytosine in the Deoxyribonucleic Acid of a Bacteriophage for <u>Xanthomonas oryzae</u> ," <u>J. Mol. Biol.</u> , 34, pp. 373-375 (1968)
AS	
AT	P. R. Langer et al., "Enzymatic Synthesis of Biotin-Labeled Polynucleotides: Novel Nucleic Acid Affinity Probes", <u>Proc. Natl. Acad. Sci. USA</u> , 78, pp. 6633-37 (1981) ["Langer I"]

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449  
(REV. 7-80)

(modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

ENZ-1 (Cont.) Div III

130,070

Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE  
12/8/87

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180  
AUG 10 1989

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	P. R. Langer and D. C. Ward, "A Rapid and Sensitive Immunological Method For In Situ Gene Mapping," in <u>Developmental Biology Using Purified Genes</u> , ed. D. D. Brown, Academic Press, pp. 647-58 (1981) ["Langer II"]
AS	
AT	P.R. Langer and D. C. Ward, Abstract 1153: "A Rapid and Sensitive Immunological Method For In Situ Gene Mapping," in <u>Journal of Supramolecular Structure and Cellular Biology</u> , ed. Alan R. Liss, Inc. (1981) ["Langer III"]

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(modified)

ATTY. DOCKET NO.

SERIAL NO.

## Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

ENZ-1 (Cont.) Div III

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						

RECEIVED GROUP 180

AUG 10 1989

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	AL							
	AM							
	AN							
	AO							
	AP							

## Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	I. R. Lehman and E. A. Pratt, "On the Structure of the Glucosylated Hydroxymethylcytosine Nucleotides of Coliphages T2, T 4 and T6," <u>J. Biol. Chem.</u> 235, pp. 3254-3259 (1960)
AS	E. T. Maggio (ed.), <u>Enzyme-Immunoassay</u> (1980)
AT	Manning et al., "A Method for Gene Enrichment Based on the Avidin-Biotin Interaction. Application to the <u>Drosophila</u> Ribosomal RNA Genes," <u>Biochemistry</u> , 16, pp. 1364-1370 (1977) [Manning I]
EXAMINER	DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449  
(REV. 7-80)

(modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

Information Disclosure Statement

Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. E. Manning et al., "A New Method Of <u>in situ</u> Hybridization," <u>Chromosoma</u> (Berl), 53, pp. 107-117 (1975) [Manning II]
AS	J. Marmur et al., "Unique Properties of Nucleic Acid from <u>Bacillus Subtilis</u> Phage SP-15, <u>Nature New Biology</u> , 239, pp. 68-70 (1972)
AT	

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449  
(Rev. 7-80) (modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

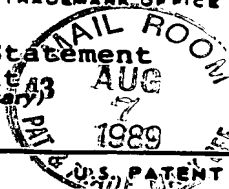
APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP



RECEIVED GROUP 180

AUG 10 1989

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	T. W. Munns and M. K. Liszewski, "Antibodies Specific for Modified Nucleotides: An Immunochemical Approach for the Isolation and Characterization of Nucleic Acids," in Progress in Nucleic Acid Research and Molecular Biology, ed. W. E. Cohn, Academic Press, 24, pp. 109-165 (1980)
AS	
AT	T. Nelson and D. Brutlag, "Addition of Homopolymers to the 3' - ends of Duplex DNA with Terminal Transferase," Methods in Enzymology (Vol. 68) Recombinant DNA, ed. R. Wu, pp. 41-50

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 (REV. 7-80) (modified)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. ENZ-1 (Cont.) Div III

SERIAL NO. 130,070

Information Disclosure Statement  
Filed By Applicant 43  
(Use several sheets if necessary)

APPLICANT David C. Ward, et al.

FILING DATE 12/8/87

GROUP



EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180  
AUG 10 1989

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
AL							
AM							
AN							
AO							
AP							

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	M. Pellegrini et al., "Application of the Avidin-Biotin Method of Gene Enrichment to the Isolation of Long Double-Stranded DNA Containing Specific Gene Sequences", Nucl. Acids Res. 4, pp. 2961-73 (1977)
AS	
AT	J. Reiser et al., "Transfer of Small DNA Fragments From Polyacrylamide Gels to Diazobenzoyloxymethyl Paper and Detection by Hybridization With DNA Probes," Biochemical and Biophysical Research Communications, 85, pp. 1104-1112 (1978)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



(modified)

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

Information Disclosure Statement  
Filed By Applicant  
(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 120

AUG 10 1989

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	P. W. J. Rigby et al., "Labeling Deoxyribonucleic Acid to High Specific Activity In Vitro by Nick Translation with DNA Polymerase I," <u>J. Mol. Biol.</u> , 113, pp. 237-251 (1977)
AS	
AT	G. T. Rudkin and R. D. Stollar, "High Resolution Detection of DNA-RNA Hybrids in situ by Indirect Immunofluorescence," <u>Nature</u> , 265, pp. 472-473 (1977)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTC-1449  
(REV. 7-80)

(modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

PAT. DOCKET NO.

ENZ-1 (Cont.) Div III

SERIAL NO.

130,070

Information Disclosure Statement

Filed By Applicant

(Use several sheets if necessary)

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
					YES NO
AL					
AM					
AN					
AO					
AP					

Other Documents (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	J. L. Ruth and D. E. Bergstrom, "C-5 Substituted Pyrimidine Nucleosides. 1. Synthesis of C-5 Allyl, Propyl, and Propenyl Uracil and Cytosine Nucleosides via Organopalladium Intermediates," <u>J. Org. Chem.</u> , 43, pp. 2870-2876 (1978)
AS	
AT	M. So, "Characterization of an <u>Escherichia coli</u> Plasmid Encoding for the Synthesis of Heat-Labile Toxin: Molecular Cloning of the Toxin Determinant", <u>Infection and Immunity</u> 21, pp. 405-411 (1978)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(modified)

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

Sheet 19 of 19

**Information Disclosure Statement**  
**Filed By Applicant**  
(Use several sheets if necessary)

ENZ-1 (Cont.) Div II

SERIAL NO.

130,070

APPLICANT

David C. Ward, et al.

FILING DATE

12/8/87

GROUP

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
AA						
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

RECEIVED GROUP 180

AUG 10 1989

**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
AL					
AM					
AN					
AO					
AP					

**Other Documents** (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	A. Sodja and N. Davidson, "Gene Mapping and Gene Enrichment by the Avidin-Biotin Interaction: Use of Cytochrome-C as a Polyamine Bridge," <u>Nucl. Acids Res.</u> , 5, pp. 383-399 (1978)
AS	
AT	M. Swierkowski and D. Shugar, "Poly 5-Ethyluridylic Acid, A Polyuridylic Acid Analogue", <u>J. Mol. Biol.</u> , 47, pp. 57-67 (1970)

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.